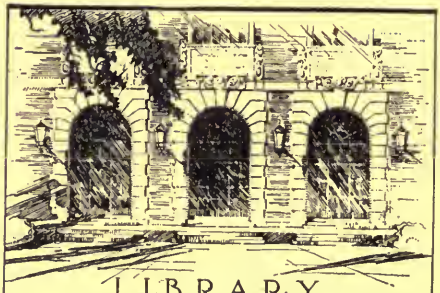

GRAIN SORGHUMS

1958 Performance in Illinois

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UNIVERSITY OF ILLINOIS AGRICULTURAL EXPERIMENT STATION

EXTENSIVE TESTING OF GRAIN SORGHUM hybrids and varieties was started in Illinois in 1956 as a result of increased interest in sorghums among Illinois growers. This bulletin reports the results of the 1958 tests. Results of the 1956 and 1957 trials were reported in mimeographs AG1738 and AG1785 of the Department of Agronomy.

The 1958 tests were carried on at seven widely separated locations in the state (Table 1). Twenty-eight sorghum hybrids and nine sorghum varieties were tested. In each field three corn hybrids adapted to the area were grown for comparison. The seed for the tests was supplied by both agricultural experiment stations and commercial seed producers (Table 2). The tests were supported in part by an entry fee for each commercial entry.

Location of 1958 test fields. The east-central test was actually nearer Champaign than Urbana.

This bulletin was prepared by C. N. Hittle, Associate Professor of Agronomy; G. E. McKibben, Associate Professor of Agricultural Research and Extension; and D. R. Browning, Research Associate in Agronomy. Thanks are due W. C. Jacob and R. D. Seif for processing the data and to O. W. Pile for his help in planting, harvesting, and threshing. Thanks are also due H. J. Schultz and Robert Schultz, Champaign, Julius Frye, Havana, and George Brokaw, Biggsville, for their assistance in the tests.

For general information about grain sorghums for Illinois farmers, see Circular 774, "Grain Sorghums in Illinois."

Table 1. — General Information on 1958 Trials

County	Location	Soil type	Soil production potential	Plot size planted[a]	Date planted	Plot size harvested	Date harvested
Champaign	H. J. Schultz and Robert Schultz farm, 5 miles southwest of Champaign	Flanagan silt loam	Very high	4 rows each 20′ long	May 23	2 rows each 12′ long	Oct. 21
Mason	Julius Frye farm, 2 miles southeast of Havana	Dune sand	Very low	4 rows each 25′ long	May 22	2 rows each 15′ long	Oct. 4
Henderson	George Brokaw farm, 2 miles northeast of Biggsville	Tama silt loam	High	4 rows each 25′ long	May 20	2 rows each 15′ long	Oct. 4
Jackson	Cooperative Agronomy Research Center at Carbondale[b]	Stoy silt loam	Moderately low	2 rows each 20′ long	June 9	2 rows each 16½′ long	Oct. 1
Pope	Dixon Springs Experiment Station	Grantsburg and Robbs silt loams	Low	4 rows each 25′ long	June 10-16	1 row, 16½′ long	Oct. 22
DeKalb	Northern Illinois Experiment Field	Flanagan silt loam	Very high	2 rows each 18′ long	May 15	Not harvested for yield because many varieties were not mature by frost.	
Fayette	Brownstown Experiment Field	Hoyleton and Cisne silt loams	Moderately low	2 rows each 19′ long	June 5	Not harvested for yield because of poor stands.	

[a] All rows were 40 inches apart.
[b] Southern Illinois University and University of Illinois cooperating.

Table 2. — Entries for 1958 Performance Tests

Hybrid or variety	Entered by
Sorghum varieties	
Combine 7078, Combine Kafir 60, Hegari, Martin, Midland, Plainsman, Redbine 60, Reliance, Westland	Illinois Agricultural Experiment Station
Sorghum hybrids	
RS 590, Texas 601, RS 610, Texas 611, Texas 620, RS 630, Texas 640, Texas 645, RS 650, Texas 660	Illinois Agricultural Experiment Station (seed furnished by Texas Agricultural Experiment Station — Substation No. 12)
RS 608	Illinois Agricultural Experiment Station (seed furnished by Nebraska and Texas Agricultural Experiment Stations)
RS 501	Illinois Agricultural Experiment Station (seed furnished by Nebraska Agricultural Experiment Station)
AMAK R-10, AMAK R-12	AMAK, Inc. — sponsored by Asgrow Texas Company, Advance Seed and Grain Company, and J. R. McNeill
DeKalb C44a, DeKalb D50a, DeKalb E56a, DeKalb Exp. 1, DeKalb Exp. 2	DeKalb Agricultural Association, Inc.
NK 135, NK 140, NK 220, NK 230, NK 3000	Northrup, King and Company
P.A.G. 425-S, P.A.G. 435-S, P.A.G. 515-S, P.A.G. 605-S	Pfister Associated Growers, Inc.
Corn hybrids	
U.S. 13, AES 702, AES 805, Ill. 1332, Ill. 1851	Illinois Agricultural Experiment Station

Data for only five of the fields are reported here. One field was not harvested for yield because many varieties did not mature, and another because of poor stand.

Growing Conditions

An abundance of moisture during the 1958 growing season (Table 3) provided generally favorable conditions for corn but not always for the sorghums. The stand at the Brownstown field in Fayette county was poor as a result of excessive moisture soon after planting, which apparently caused seed and seedling rot. This field was not harvested for yield. Temperatures below normal and excessive moisture at Champaign apparently reduced emergence and caused slow establishment of entries.

At DeKalb in northern Illinois, moisture was limited at the time of planting, emergence was slow, and the sorghums were slow in becoming established. Many of the entries had not reached maturity by the time of the first frost, on October 1, and so the field was not harvested for yield.

The cool temperatures and reduced sunlight which prevailed during much of June, July, and August in 1958 undoubtedly delayed blooming at some locations. At Champaign the average number of days to reach mid-bloom was 84 in 1958 compared with 61 in 1957. At Carbon-

Table 3. — 1958 Rainfall Data From Weather Stations Near or at Locations of Trials

County	Weather station location	Precipitation						
		May	June	July	Aug.	Sept.	Oct.	Six-month total
		in.	*in.*	*in.*	*in.*	*in.*	*in.*	*in.*
Champaign	Urbana	4.29	7.50	7.17	3.27	2.84	.42	25.49
Mason	Havana	1.00	5.68	8.02	1.89	1.91	1.59	20.09
Henderson	Gladstone Dam	3.98	7.34	6.02	3.26	3.02	1.15	24.77
Jackson	Agronomy Research Center, Carbondale	4.34	4.94	10.79	5.09	2.40	1.89	29.45
Pope	Dixon Springs Experiment Station	3.55	4.76	14.25	3.21	2.73	1.14	29.64
DeKalb	Northern Illinois Experiment Field	2.74	6.38	5.69	3.81	1.26	2.39	22.27
Fayette	Brownstown Experiment Field	3.25	3.45	10.29	1.57	3.22	1.86	23.64

dale in Jackson county, days to mid-bloom stage averaged 72 in 1958 and 62 in 1957.

Planting and Harvesting

The experimental design used was a 6×7 rectangular lattice with three replications, except at DeKalb where a randomized block design with three replications was used.

All trials were planted with a hand seeder in 40-inch rows at the calibrated rate of 8 seeds per foot. Stands were not thinned. Only those portions of the rows with adequate and uniform stands were harvested for yield data. Sorghum heads were harvested by hand. Heads from each plot were dried artificially to approximately 10 to 12 percent moisture, threshed by a Vogel nursery thresher, and cleaned by a fan.

Results

Data for 1958 and for summaries for 1956, 1957, and 1958 are presented in Tables 4 through 8. Three-year averages are, of course, more reliable than results for only one year. The fact that an entry does not appear in the summary, however, does not mean it is inferior; its absence merely indicates that it was not tested for all three seasons.

Yields. All yields, including corn yields, were adjusted to 13 percent moisture and 56 pounds per bushel.

Average yields for sorghum hybrids in 1958 were about 40 percent above those for the varieties. In most trials, the hybrid sorghums did not yield as well as corn. It is not expected that existing sorghum

hybrids will yield better than corn under conditions favorable for corn. The sorghums are more likely to be grown on drouthy soils, such as the sands and claypans, where reduced corn yields can be expected, especially in a dry year. In Mason county on Dune sand, the sorghums had an advantage and yielded better than the corn. Sorghums are also likely to be grown when late plantings are necessary.

Maturity. A good measure of relative maturity of the different entries is the number of days to bloom, considered to be when 50 percent of the head has flowered.

In 1958 there was a difference of 12 and 13 days between the time of flowering of the earliest and latest varieties in Champaign and Jackson counties respectively. In years when blooming is not delayed as it was in 1958, the difference approximates 17 days.

In northern Illinois, only the earliest-maturing varieties and hybrids can be expected to reach maturity before frost. In central and southern Illinois, medium- and late-maturing varieties should be grown because of their greater yield.

Test weight. The test weight, or weight per bushel, is one of the quality factors used in determining the grade that is assigned in commercial marketing of grain. Entries in these trials did not differ greatly in this characteristic.

Head exsertion. Head exsertion is the distance from the top leaf (flag leaf) to the base of the head. Sorghums with good head exsertion are more easily combined because less plant material passes through the combine.

The range among entries for head exsertion is usually about 6 inches; in the Illinois trials, most hybrids exceeded the varieties in this characteristic.

Lodging. Plants were considered lodged when they inclined more than 45 degrees. In the 1958 trials, there was little lodging and no important difference among entries, so the data are not reported here.

Height. Height is measured from the ground level to the top of the plant. Shorter varieties and hybrids are easier to combine. In the 1958 trials, in Champaign county, entries ranged from 46 to 72 inches in height; in Jackson, from 47 to 75; in Pope, from 47 to 76; and in Mason county, on Dune sand where moisture is more limited, the range was from 32 to 55 inches.

Silage. Grain sorghums can be made into silage but can be expected to yield less than forage sorghums. For the past three years at Dixon Springs, grain sorghums averaged 9.7 tons of silage an acre, while forage sorghums averaged 14.1 tons and corn 12.6 tons. In 1958 all silage yields at Dixon Springs were lower than for the two previous years.

Interpreting Yield Differences in the Tables

Entries are ranked in the order of yield, but it should be remembered that small differences do not necessarily indicate that one hybrid or variety is inherently superior to another. To find whether a variety is significantly different from another in yield, it is necessary to examine the column immediately to the right of the yield, which indicates the shortest significant ranges.[1] Entries included in the same line are not significantly different from each other, and those not included in the same line are significantly different.

Shortest significant ranges have also been calculated for the characteristics other than yield. They are not included here, but may be obtained by writing to the Department of Agronomy, University of Illinois, Urbana.

[1] These ranges have been computed in accordance with Duncan's "Multiple Range Test." See D. B. Duncan, "Multiple Range and Multiple F Tests," Biometrics 11 (1), 1-43. 1955.

Table 4. — East-Central Illinois, Champaign County

Rank in yield	Hybrid or variety	Yield at 13% moisture	Shortest significant ranges[a]	Test weight	Plant height	Head exsertion	Days to bloom
		bu/acre		*lb.*	*in.*	*in.*	
	1958 RESULTS						
1	U.S. 13 (corn)	129		58	107	..	..
2	AES 702 (corn)	127		58	101	..	..
3	Ill. 1332 (corn)	119		58	100	..	..
4	DeKalb D50a	111		57	69	10	81
5	Texas 601	110		57	62	9	84
6	RS 610	110		56	62	10	83
7	Texas 620	105		58	64	8	82
8	Texas 611	104		56	65	9	84
9	P.A.G. 435-S	101		59	55	8	83
10	AMAK R-10	101		55	56	11	84
11	RS 501	100		56	72	8	78
12	RS 608	99		56	58	10	83
13	Texas 660	99		58	63	10	84
14	DeKalb C44a	98		54	52	8	82
15	RS 630	97		54	61	6	84
16	AMAK R-12	97		55	60	8	85
17	DeKalb E56a	97		56	60	9	84
18	P.A.G. 605-S	96		57	64	9	85
19	DeKalb Exp. 1	95		57	67	9	85
20	P.A.G. 515-S	94		54	64	7	86
21	RS 590	93		56	59	9	85
22	P.A.G. 425-S	93		57	59	10	82
23	NK 230	88		55	57	9	85
24	NK 135	86		56	65	10	79
25	Texas 640	86		52	49	8	85
26	RS 650	85		56	56	8	85
27	NK 140	85		56	60	8	86
28	DeKalb Exp. 2	84		54	55	9	86
29	Texas 645	80		52	48	6	85
30	Hegari (variety)	79		56	68	7	78
31	NK 220	79		56	58	9	87
32	NK 3000	78		55	61	10	80
33	Westland (variety)	78		55	46	5	87
34	Martin (variety)	76		57	57	8	88
35	Midland (variety)	74		57	63	6	84
36	Redbine 60 (variety)	73		56	61	8	86
37	Combine 7078 (variety)	70		52	46	5	85
38	Combine Kafir 60 (variety)	59		56	60	5	86
39	Plainsman (variety)	53		52	53	7	90
40	Reliance (variety)	42		55	55	8	78
	Av. all entries	91		56	62	8	84
	Av. 3 corn hybrids	125		58	103	..	..
	Av. 28 sorghum hybrids	95		56	60	9	84
	Av. 9 sorghum varieties	67		55	57	7	85

SUMMARY: 1956-1958 OR 1957-1958 AVERAGES

		(1956-1958)	(1956-1958)	(1956-1958)	(1957-1958)	(1957-1958)
1	DeKalb D50a	114	59	62	10	70
2	Corn (av. of 3 hybrids)	113	58	110	..	..
3	RS 610	112	57	60	9	71
4	Texas 620	109	59	62	8	72
5	Texas 601	108	59	58	8	72
6	Texas 660	104	58	61	8	74
7	Texas 611	103	58	60	7	72
8	DeKalb E56a	103	58	60	8	72
9	RS 501	101	58	69	8	66
10	RS 650	101	58	55	7	74
11	RS 590	100	58	59	8	72
12	Hegari (variety)	100	58	71	5	76
13	Redbine 60 (variety)	90	57	58	7	73
14	Martin (variety)	86	59	57	8	75
15	Combine 7078 (variety)	82	53	47	6	74
16	Combine Kafir 60 (variety)	78	58	57	4	74
17	Midland (variety)	76	58	58	6	72
18	Plainsman (variety)	75	55	51	6	78
19	Westland (variety)	74	58	48	5	76
20	Reliance (variety)	55	56	55	8	65
	Av. corn hybrids	113	58	110	..	..
	Av. 10 sorghum hybrids	106	58	61	8	72
	Av. 9 sorghum varieties	80	57	56	6	74

[a] Entries included in the same line are not different from each other at the 5-percent level of significance.

Table 5. — Central Illinois, Mason County

Rank in yield	Hybrid or variety	Yield at 13% moisture	Shortest significant ranges[a]	Test weight	Plant height
		bu/acre		*lb.*	*in.*
	1958 RESULTS				
1	RS 630	58		60	48
2	RS 650	54		58	42
3	RS 610	52		58	47
4	DeKalb D50a	52		59	55
5	NK 230	52		58	45
6	Texas 620	51		59	45
7	RS 590	50		57	50
8	P.A.G. 425-S	47		60	41
9	Texas 645	46		57	43
10	AMAK R-12	44		60	48
11	NK 3000	44		59	48
12	AMAK R-10	42		60	42
13	RS 608	42		58	44
14	Texas 611	41		58	48
15	DeKalb E56a	41		58	50
16	DeKalb Exp. 2	41		60	44
17	P.A.G. 515-S	40		59	46
18	P.A.G. 435-S	39		59	42
19	Combine Kafir 60 (variety)	37		58	45
20	Hegari (variety)	37		59	49
21	Texas 601	36		60	43
22	Texas 640	36		59	36
23	DeKalb C44a	35		59	45
24	Combine 7078 (variety)	35		57	32
25	Texas 660	35		59	48
26	NK 140	34		60	47
27	Westland (variety)	33		58	42
28	NK 135	33		56	52
29	DeKalb Exp. 1	32		58	48
30	Plainsman (variety)	28		58	41
31	U.S. 13 (corn)	27		56	60
32	NK 220	26		58	46
33	Martin (variety)	25		58	44
34	RS 501	24		60	50
35	P.A.G. 605-S	24		58	48
36	Redbine 60 (variety)	24		57	44
37	AES 702 (corn)	18		56	53
38	Ill. 1332 (corn)	18		56	51
	Av. all entries	38		58	46
	Av. 3 corn hybrids	21		56	55
	Av. 28 sorghum hybrids	41		59	46
	Av. 7 sorghum varieties	31		58	42
	SUMMARY: 1956-1958 AVERAGES				
1	RS 650	63		58	39
2	DeKalb D50a	62		57	49
3	RS 610	61		58	43
4	Combine Kafir 60 (variety)	55		59	42
5	RS 501	52		58	47
6	Hegari (variety)	51		57	50
7	Westland (variety)	47		58	39
8	Corn (av. of 3 hybrids)	46		56	48
	Av. corn hybrids	46		56	48
	Av. 4 sorghum hybrids	60		58	44
	Av. 3 sorghum varieties	51		58	44

[a] Entries included in the same line are not different from each other at the 5-percent level of significance.

Table 6. — West-Central Illinois, Henderson County

Rank in yield	Hybrid or variety	Yield at 13% moisture	Shortest significant ranges[a]	Test weight	Protein
		bu/acre		*lb.*	*perct.*
		1958 RESULTS			
1	U.S. 13 (corn)	132		57	10.0
2	AES 702 (corn)	126		57	10.0
3	Ill. 1332 (corn)	126		58	10.0
4	RS 610	124		58	10.6
5	AMAK R-12	122		58	10.6
6	DeKalb E56a	117		57	11.9
7	Texas 601	116		58	10.6
8	DeKalb D50a	116		57	10.0
9	Texas 611	115		60	11.9
10	RS 590	113		58	11.9
11	Texas 620	111		59	11.9
12	DeKalb Exp. 1	111		60	11.9
13	RS 650	110		59	10.6
14	Texas 660	108		59	10.6
15	AMAK R-10	106		56	11.2
16	P.A.G. 425-S	106		58	12.5
17	P.A.G. 515-S	105		58	11.2
18	P.A.G. 605-S	105		60	12.5
19	RS 630	105		57	10.6
20	DeKalb C44a	104		56	11.9
21	P.A.G. 435-S	103		58	12.5
22	NK 230	102		58	12.5
23	RS 608	101		58	11.6
24	Martin (variety)	101		60	13.8
25	Texas 640	101		57	11.2
26	NK 3000	96		57	11.2
27	Plainsman (variety)	94		58	11.9
28	Redbine 60 (variety)	92		58	11.9
29	DeKalb Exp. 2	89		56	11.9
30	RS 501	87		59	11.2
31	Texas 645	86		58	11.9
32	Combine Kafir 60 (variety)	86		59	10.6
33	NK 220	86		59	13.1
34	NK 140	85		58	11.9
35	Combine 7078 (variety)	81		57	11.2
36	NK 135	80		58	12.5
37	Westland (variety)	77		60	14.4
38	Midland (variety)	75		58	10.6
39	Hegari (variety)	73		57	10.6
40	Reliance (variety)	43		56	11.9
	Av. all entries	100		58	11.5
	Av. 3 corn hybrids	128		57	10.0
	Av. 28 sorghum hybrids	103		58	11.6
	Av. 9 sorghum varieties	80		58	11.9

[a] Entries included in the same line are not different from each other at the 5-percent level of significance.

Table 7. — Southern Illinois, Jackson County

Rank in yield	Hybrid or variety	Yield at 13% moisture	Shortest significant ranges[a]	Test weight	Plant height	Head exser-tion	Days to bloom
		bu/acre		*lb.*	*in.*	*in.*	
	1958 RESULTS						
1	AES 805 (corn)	94		54	..	..	..
2	Ill. 1851 (corn)	86		54	..	..	..
3	Ill. 1332 (corn)	84		54	..	..	..
4	P.A.G. 435-S	69		57	56	13	70
5	Texas 640	68		56	52	13	72
6	AMAK R-12	65		55	61	12	73
7	P.A.G. 515-S	65		55	60	12	69
8	RS 610	63		57	60	14	70
9	NK 230	62		57	57	14	69
10	Texas 660	62		56	60	12	71
11	P.A.G. 605-S	61		55	56	13	72
12	RS 650	58		55	60	11	71
13	NK 220	56		57	59	14	72
14	Texas 645	54		54	51	13	67
15	P.A.G. 425-S	54		58	50	12	69
16	RS 590	53		55	63	13	74
17	Texas 601	52		56	58	13	73
18	Texas 620	51		56	63	13	71
19	RS 501	51		57	67	12	67
20	DeKalb C44a	51		55	57	9	75
21	RS 608	46		58	56	14	72
22	DeKalb D50a	46		58	73	12	73
23	DeKalb E56a	46		56	63	14	72
24	DeKalb Exp. 1	46		56	60	15	71
25	AMAK R-10	43		57	53	15	68
26	Combine Kafir 60 (variety)	43		49	62	8	78
27	Plainsman (variety)	43		54	55	12	77
28	Martin (variety)	42		57	61	11	76
29	DeKalb Exp. 2	41		56	53	11	70
30	Hegari (variety)	40		57	75	9	74
31	Westland (variety)	39		57	51	13	71
32	Reliance (variety)	38		55	54	9	65
33	Redbine 60 (variety)	38		55	59	13	72
34	RS 630	34		55	62	10	73
35	Midland (variety)	33		51	58	9	76
36	Combine 7078 (variety)	31		53	47	11	73
37	Texas 611	29		51	68	14	76
	Av. all entries	52		55	59	12	72
	Av. 3 corn hybrids	88		54	..	..	..
	Av. 25 sorghum hybrids	53		56	59	13	71
	Av. 9 sorghum varieties	39		54	58	11	74
	SUMMARY: 1956-1958 OR 1957-1958						
		(1956-1958)			(1956-1958)	(1957-1958)	(1957-1958)
1	Corn (av. of 3 hybrids)	86	..		78	..	..
2	RS 610	75	..		54	10	65
3	Texas 620	67	..		54	10	66
4	RS 650	67	..		52	8	66
5	DeKalb D50a	65	..		62	8	66
6	RS 590	65	..		55	10	67
7	Combine Kafir 60 (variety)	64	..		54	6	72
8	RS 501	62	..		62	10	61
9	Texas 611	56	..		57	10	68
10	DeKalb E56a	55	..		51	8	68
11	Martin (variety)	55	..		52	9	70
	Av. corn hybrids	86	..		78	..	..
	Av. 8 sorghum hybrids	64	..		56	9	66
	Av. 2 sorghum varieties	60	..		53	8	71

[a] Entries included in the same line are not different from each other at the 5-percent level of significance.

Table 8. — Southern Illinois, Pope County

Rank in yield	Hybrid or variety	Yield at 13% moisture	Shortest significant ranges[a]	Grain moisture at time of frost	Plant height	Head exsertion	Dry matter of silage at time of harvest	Silage at 70% moisture
		bu/acre		*perct.*	*in.*	*in.*	*perct.*	*T/acre*
	1958 RESULTS							
1	AMAK R-10	46		19.3	59	8	40.0	8.8
2	RS 610	39		20.3	61	7	38.1	9.4
3	AMAK R-12	39		22.3	60	8	36.5	8.6
4	Texas 640	35		22.6	51	9	37.8	3.9
5	P.A.G. 425-S	34		19.6	57	8	39.3	7.1
6	Texas 660	33		21.3	63	9	32.1	8.8
7	RS 608	32		21.6	58	8	37.8	7.2
8	Ill. 1332 (corn)	32		20.0	93	..	49.6	4.9
9	Texas 601	30		23.0	59	8	37.0	8.9
10	P.A.G. 515-S	29		23.0	59	8	35.3	5.7
11	P.A.G. 435-S	29		20.3	55	8	32.8	8.8
12	Texas 611	29		22.6	62	8	31.1	9.5
13	AES 805 (corn)	28		24.6	98	..	39.8	6.7
14	Combine 7078 (variety)	27		25.6	48	8	33.6	3.7
15	Ill. 1851 (corn)	27		25.6	99	..	36.3	7.5
16	Texas 645	26		24.6	53	9	39.3	3.2
17	NK 230	25		20.6	57	9	42.6	7.4
18	RS 650	25		21.6	54	8	34.6	7.1
19	Westland (variety)	24		20.3	50	10	34.6	5.2
20	RS 630	24		27.0	58	8	32.6	7.0
21	DeKalb Exp. 1	23		21.0	63	9	36.6	7.3
22	RS 501	22		20.6	64	9	33.5	5.1
23	Texas 620	21		22.4	59	9	34.6	6.3
24	DeKalb D50a	20		25.0	68	9	37.0	6.6
25	RS 590	20		22.6	61	8	37.8	8.9
26	DeKalb E56a	19		22.3	60	10	33.1	7.4
27	Hegari (variety)	17		19.3	76	7	33.0	6.0
28	DeKalb C44a	16		26.6	53	9	35.5	5.1
29	Combine Kafir 60 (variety)	16		28.3	56	8	31.6	5.9
30	P.A.G. 605-S	16		21.3	60	9	32.1	5.7
31	Martin (variety)	16		22.5	55	8	35.6	4.7
32	NK 220	15		22.0	53	8	32.8	5.2
33	Plainsman (variety)	15		30.3	47	9	32.0	4.9
34	DeKalb Exp. 2	15		23.0	53	9	32.6	4.4
35	Redbine 60 (variety)	13		19.6	56	9	41.3	8.2
36	Reliance (variety)	9		17.0	55	9	29.8	3.8
37	Midland (variety)	7		23.0	56	8	28.5	3.5
	Av. all entries	24		22.4	61	8	35.7	6.4
	Av. 3 corn hybrids	29		23.4	97	..	41.7	6.4
	Av. 25 sorghum hybrids	27		22.2	58	8	35.8	6.9
	Av. 9 sorghum varieties	16		23.0	55	8	33.3	5.1
	SUMMARY: 1956-1958 AVERAGES							
1	RS 610	70		....	55	..	....	11.6
2	RS 650	64		....	52	..	....	10.1
3	DeKalb D50a	61		....	63	..	....	11.4
4	Corn (av. of 3 hybrids)	57		....	99	..	....	12.6
5	RS 501	54		....	62	..	....	11.1
6	Texas 620	50		....	57	..	....	11.2
7	Hegari (variety)	50		....	67	..	....	10.4
8	RS 590	47		....	55	..	....	11.2
9	Combine 7078 (variety)	47		....	44	..	....	8.0
10	Plainsman (variety)	44		....	45	..	....	9.8
11	Texas 611	43		....	57	..	....	10.0
12	Martin (variety)	43		....	49	..	....	9.4
13	Redbine 60 (variety)	41		....	53	..	....	9.6
14	Combine Kafir 60 (variety)	41		....	52	..	....	9.3
15	Midland (variety)	36		....	53	..	....	9.6
16	Westland (variety)	34		....	45	..	....	7.0
17	Reliance (variety)	26		....	53	..	....	5.8
	Av. corn hybrids	57		....	99	..	....	12.6
	Av. 7 sorghum hybrids	56		....	57	..	....	10.9
	Av. 9 sorghum varieties	40		....	51	..	....	8.8

[a] Entries included in the same line are not different from each other at the 5-percent level of significance.

Urbana, Illinois April, 1959
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